

## CHANGE ISSUE – RTCA/DO-242

# MASPS for ADS-B

## Rev. A

Tracking Information (committee secretary only)	
Change Issue Number	22
Submission Date	2/20/01
Status (open/closed/deferred)	Rev A. – CLOSED
Last Action Date	2/22/02

Short Title for Change Issue:	Means to Ensure “Backwards” Compatibility With Deployed ADS-B Systems.
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MASPS Document Reference:		Originator Information:	
Entire document (y/n)	TBD	Name	Gary Livack / FAA
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Paragraph number(s)		E-mail	<a href="mailto:Garret.livack@faa.gov">Garret.livack@faa.gov</a>
Table/Figure number(s)		Other	livack@worldnet.att.net

Proposed Rationale for Consideration (originator should check all that apply):	
<input type="checkbox"/>	Item needed to support of near-term MASPS/MOPS development
<input type="checkbox"/>	DO-260 / ED-102 1090 MHz Link MOPS Rev A
<input type="checkbox"/>	ASA MASPS
<input type="checkbox"/>	TIS-B MASPS
<input type="checkbox"/>	UAT MOPS
<input type="checkbox"/>	Item needed to support applications that have well defined concept of operation
<input type="checkbox"/>	Has complete application description
<input type="checkbox"/>	Has initial validation via operational test/evaluation
<input type="checkbox"/>	Has supporting analysis, if candidate stressing application
<input type="checkbox"/>	Item needed for harmonization with international requirements
<input type="checkbox"/>	Item identified during recent ADS-B development activities and operational evaluations
<input type="checkbox"/>	MASPS clarifications and correction item
<input type="checkbox"/>	Validation/modification of questioned MASPS requirement item
<input type="checkbox"/>	Military use provision item
<input type="checkbox"/>	New requirement item (must be associated with traffic surveillance to support ASAS)

Nature of Issue:	<input type="checkbox"/> Editorial	<input type="checkbox"/> Clarity	<input type="checkbox"/> Performance	<input type="checkbox"/> Functional
<u>Issue Description:</u>  Need to address issue (in future) of how to ensure “backward compatibility” with already deployed ADS-B systems built to earlier standards. (One specific ADS-B application now being made “certification ready” and that may require backwards compatibility / interoperability is the ACM function).  The issue is how to add additional message set elements in the future, and still ensure fleetwide, backwards compatibility. It would be useful to create some flexibility now in the message set definitions such that modifications are easier in the future.				

<u>Originator’s proposed resolution:</u> None.
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#### Working Group 6 Deliberations:

February 28, 2001: This Issue Paper was discussed by the ad hoc group at their February 2001 meeting. It was mentioned that the 1090 MOPS will use version designation identification to address configuration of 1090MHz equipment. It was agreed that the MASPS should require all MOPS to support version designation or other methods to deal with fundamental surveillance interoperability changes. Mode Status message could contain the version information. **AI 3-6:** Tom Foster to write White Paper on backward compatibility subject.

May 24, 2001: This Issue Paper was reviewed by the ad hoc group at their May 2001 meeting. It was agreed that this IP will be addressed in Revision A. AI 3-6 is still open.

February 22, 2002: This Issue Paper was discussed as part of the review of 242A-WP-12-04 by WG6 at their February meeting. It was agreed to add a Modes Status report element “ADS-B Version Number”. WG6 determined this field is all that should be done at the MASPS level in regards to backwards compatibility. This new MS report element will close this Issue Paper.

#### Working Group 6 Final Resolution:

Below is section 3.4.4.3 which contains the definition of the Modes Status report element “ADS-B Version Number” as it appears in the draft DO-242A delivered to RTCA March 4, 2002.

#### **3.4.4.3 ADS-B Version Number**

The ADS-B Version Number is a 3-bit field that specifies the ADS-B version of the transmitting ADS-B system. The ADS-B Version Number **shall** (R3.95) be defined as specified in Table 3.4.4.3 below.

**Table 3.4.4.3: ADS-B Version Number**

Value	ADS-B Version
0	DO-242
1	DO-242A
2-7	Reserved for future growth.

*Note: Messages transmitted to support this report element might signify lower level document (i.e. MOPS) version. However, ADS-B reports need to – at a minimum – signify MASPS version so that applications can appropriately interpret received ADS-B data.*